

Safety in Healthcare Facilities

- **Hospital Personnel**
- **Electrical Safety**
- **Codes, Directives and Regulations**
- **Biomedical Test Equipment**
- **Biological Hazards**
- **Chemical Hazards**
- **Fire Safety**
- **Management and Customer Service**

Objectives

- ✓ Describe the role of the Medical Equipment Service Professional in the healthcare environment as an in-house BMET, an ISO BMET, and as a Manufacturer's Service Representative.
- ✓ Describe the roles of physicians, nurses, allied health personnel, and other personnel in the healthcare environment.
- ✓ Describe the role of the Risk Manager and his/her relationship with Clinical Engineering Department.
- ✓ Describe a typical hospital organization chart.
- ✓ Name the function of each department of a typical hospital.

In House

- Work in a hospital and FOR the hospital
- Set duties or areas to work in (Specialization)

Advantages

- 8 to 5 workday normally.
- Wide variety of equipment to work on.
- Become very familiar (expert) on the equipment within your facility.

Disadvantages

- Lower pay
- Longer periods between raises.
- On call - normally

Independent Service Organizations (ISO)

- Contracted to a hospital to maintain and repair their equipment
- May be on- site in one hospital
- May travel to multiple hospitals

Advantages

- Most have a very good career ladder
- Raises dependent on location, position and expertise

Disadvantages

- May have to move to move up
- As much as 60% travel time

Manufacturer (OEM)

- Service representatives for the original equipment manufacturer

Advantages

- Best career ladder
- Better benefits
- Top of the pay scale
- Best training on “their” equipment
- Inside track for technical support

Disadvantages

- Specialized training can be limiting
- Frequent travel
- May have to move to move up

Roles of Staff in Healthcare

- **Medical Staff**

- Doctors
- Physician Assistants
- Professors
- Examples
 - Family Practitioners
 - Surgeons
 - Medical School Professors

- Direct Patient Care

- **Nursing Staff**

- RN's
- LVN's
- LPN's
- Nursing Aides

Allied Health Departments

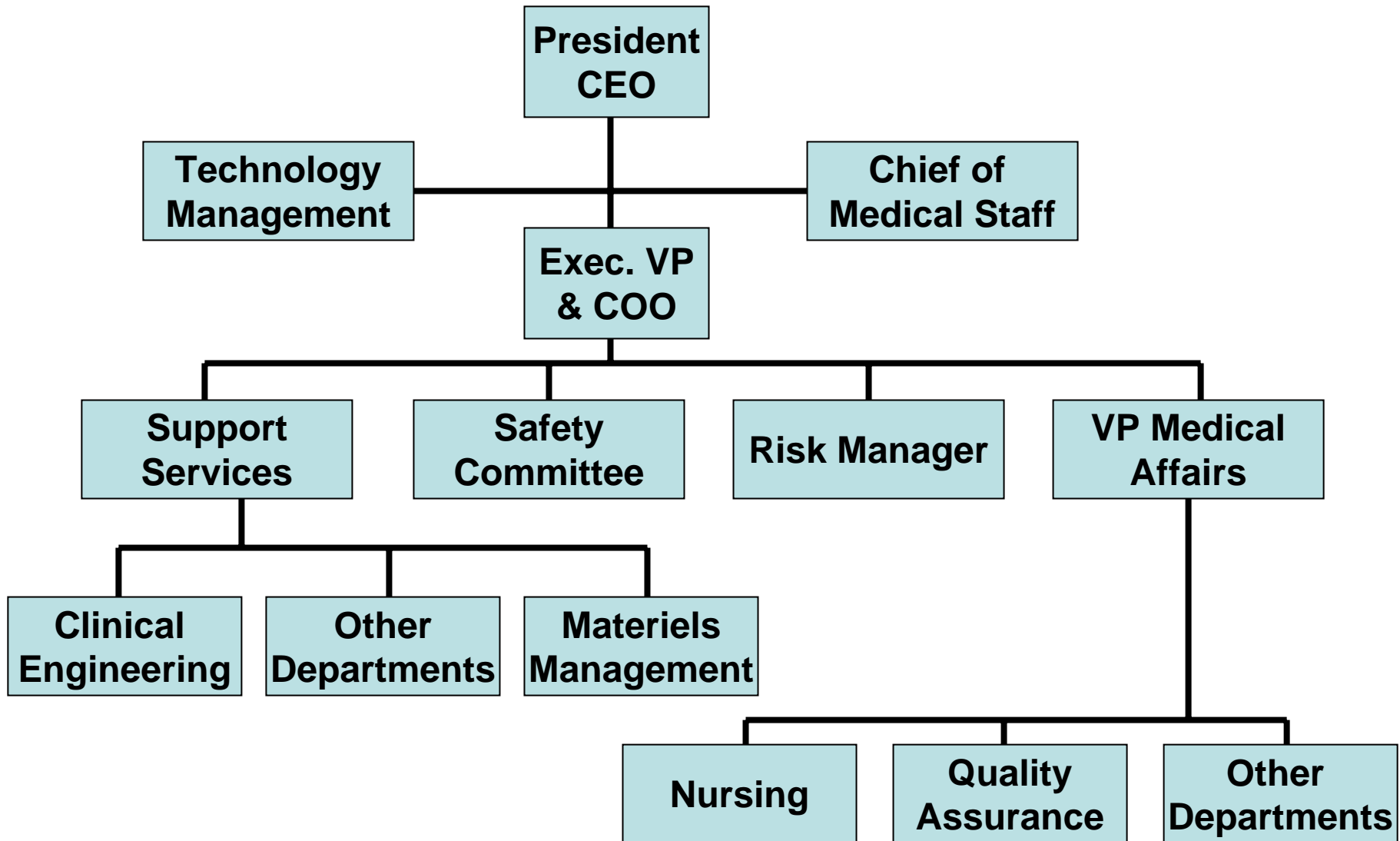
- Respiratory Therapist
- Laboratory
- Radiology
- ETC.

Other

- Plant Maintenance
- Clinical Engineering
- Security
- Dietary
- Housekeeping

- Risk Manager
 - Deals with equipment safety incidents
 - Deals with equipment recalls
 - Deals with Safety and QC

Organizational Chart



Major Areas of The Hospital

ICU (Intensive Care Unit) - Monitors and treat patients requiring intensive care due to accident or illness. Common equipment may include bedside monitors, central stations, defibrillators, electrocardiographs, infusion pumps, noninvasive blood pressure monitors, pulse oximeters, and thermia blankets.

CCU (Cardiac Care Unit) - Monitors and treats patients with heart problems. Common equipment found in this department may include arrhythmia monitors, bedside monitors, cardiac output, central stations, defibrillators, electrocardiographs, infusion pumps, noninvasive blood pressure monitors, pulse oximeters and telemetry systems.

PCU (Progressive Care Unit) - Used as a step down unit from ICU or CCU. Sometimes used after a patient's condition is stabilized but may still require less intense monitoring. Common equipment found in this department may include bedside monitors, central stations, defibrillators, infusion pumps, noninvasive blood pressure monitors, pulse oximeters and telemetry systems.

CSD (Cardiac Services Department) - Tests patients with suspected heart problems. Common equipment found in this department may include defibrillators, electrocardiographs, holter monitoring and treadmill systems.

ER (Emergency Department) - Monitors and treats patients mainly with life threatening conditions due to accident or illness. Common equipment found in this department may include bedside monitors, blood warmers, central stations, defibrillators, electrocardiographs, infusion pumps, noninvasive blood pressure monitors, pulse oximeters and thermia blankets.

Peds (Pediatric Departments) - Monitors and treats children after accident or illness. Common equipment found in this department may include bedside monitors, central stations, fetal monitors, infant incubators, infant radiant warmers, infusion pumps, noninvasive blood pressure monitors, phototherapy and pulse oximeters.

NICU (Neonatal Intensive Care Unit) - Monitors and treats neonates due to accident or illness. Common equipment may include bedside monitors, central stations, defibrillators, electrocardiographs, infant incubators, infant radiant warmers, infusion pumps, noninvasive blood pressure monitors, pulse oximeters, and thermia blankets.

OB (Obstetrics) - Monitors and treats patients who are pregnant. Is responsible for delivering babies. Common equipment may include fetal monitors, infant incubators, infant radiant warmers, infusion pumps, noninvasive blood pressure monitors and pulse oximeters.

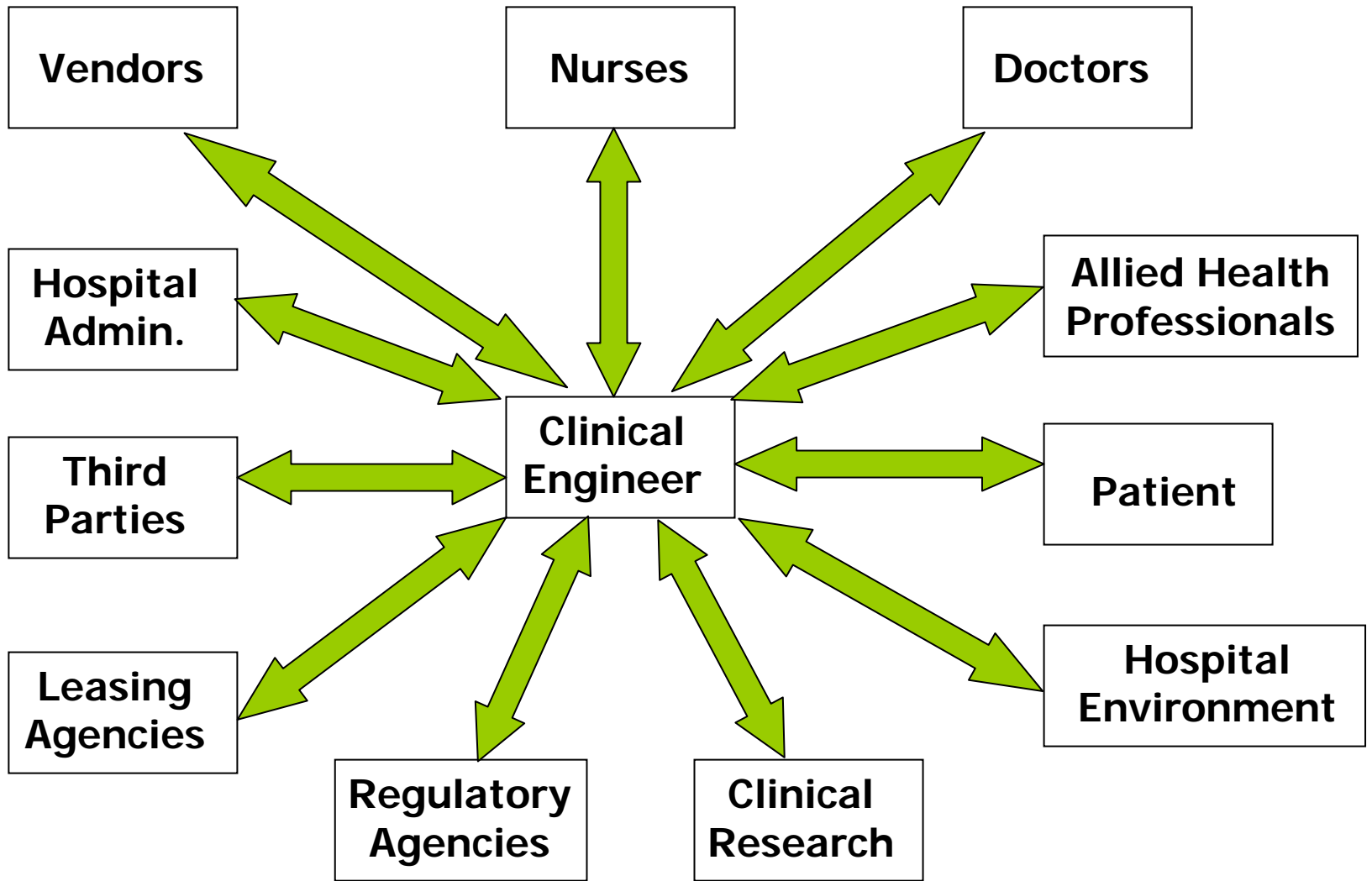
NU (Nursery) - Monitors and treats newborns after birth and ensures the newborn is ready to return home with the parents. Common equipment may include bedside monitors, infant incubators, infant radiant warmers, infusion pumps, noninvasive blood pressure monitors, phototherapy and pulse oximeters.

OR (Operating Rooms) - A sterile room where surgical operations are performed on patients to correct abnormal functions due to accident or illness. Common equipment may include bedside monitors, blood warmers, defibrillators, electrosurgical units, infusion pumps, multi-gas monitors, noninvasive blood pressure monitors, pulse oximeters and thermia blankets.

REC or PACU (Recovery or Post Anesthetic Care Unit) - Monitors patients after surgery in OR until the patient's vital signs are stabilized. Common equipment may include bedside monitors, central stations, defibrillators, infusion pumps, noninvasive blood pressure monitors and pulse oximeters.

Major Areas of The Hospital

- General Care Area
 - Patients are expected to come into contact with ordinary electrical appliances (lamps, beds, etc)
- Critical Care Area
 - Patients are subjected to invasive procedures and directly connected to power-line operated medical devices.
- Wet Locations
 - Patient care areas normally subject to wet conditions. Generally only Hydrotherapy dept.
- Non- patient Care Area
 - Areas in which patients are not normally cared for or treated such as Admin offices, laboratories, nursing stations, storage areas, kitchen or plant operations.



Additional Notes